

Climate Change and California Forests

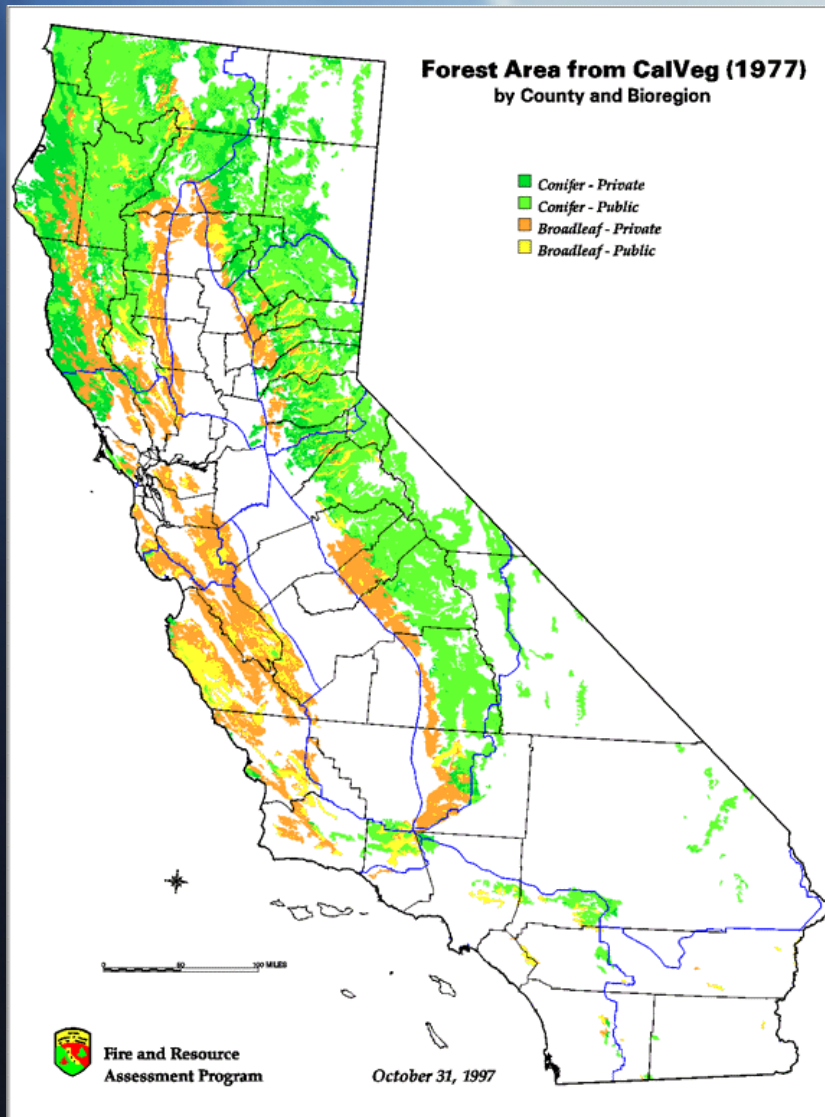
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California Forests



- 32 million acres (13 million ha) forest and woodlands – one third CA
 - Half private, half public
 - Half is productive timberland
- 2.5 billion metric tons stored forest carbon and 9 billion tons CO₂
- GHG annual net CO₂ sink estimates: -5 to -80 million metric tons
- CAL FIRE
 - fire protection on 31 million acres
 - regulates harvest on 7 million ac
 - cost-share forest improvement
 - demonstration forests
- Federal government: management and fire protection on 52% of forests

Key Threats to California Forests

- Wildfire damage to forests and communities
 - 5.5 million acres and 5 million houses now in high risk areas; near doubling of 5-yr average burned acres over 25 years
 - Early snowmelt x high temps ► longer, more severe fire seasons
- Forest and rangeland insects and pathogens
 - Bark beetles in Southern California → catastrophic fires
 - Exotic annuals increase fire risk plus decrease range and wildlife values
- Vegetation changes from climate and wildfire
 - Decline in conifer forests and oak woodlands
 - Increase in grasslands and hardwood forests
- Watershed impacts from fire
- Habitat impacts from fragmentation

CAL FIRE Responses to Climate Change

- Early insistence on forestry mitigation potential at Governor's Climate Action Team
- Early support for California Climate Action Registry and forestry protocols
- Promote increased use of forest biomass for energy
 - Biomass Interagency Work Group develops Biomass Roadmap and Bioenergy Action Plan
- Identify and implement key research needs
 - Climate Scenarios Research Team
 - Work with USFS
 - WESTCARB
- Promote cap and trade markets with Air Resources Board
- Promote discussions of adaptation
- Work with other agencies on demonstration projects and initiatives



Forest Mitigation Strategies

Strategies

- Reforestation
- Conservation Forest Management
- Conservation (avoided development)
- Urban Forestry
- Fuels Management/Biomass

Emphases to date

- Quantify mitigation benefits at state level
- Promote state, regional and national markets to fund forest carbon projects
- Improve protocols and science for landowners and stakeholders
- Work with USFS to reduce fuels and reforest burns
- Ensure landowners share in revenues from biomass-based renewable energy

Adaptation Strategies

Incorporate climate risks into programs

- State Fire Plan: identify increasing risks, prevention options and suppression service implications
- Timber harvest regulation: evaluate restocking and other standards
- Cost-share: provide guidance and assistance for fuels management and reforestation
- State nurseries: increase and diversify genetic materials
- Fire and resource assessment: restore data, monitoring and analysis capabilities
- State forest: research and demonstration

Collaborate with private sector and other agencies

- Promote fuels reduction and fire prevention
- Improve land use to conserve forests and reduce fire risks
- Address ecological issues and demonstrate proactive projects

Seek new funding sources

Accomplishments

- Forestry included in CA Global Warming Solutions Act (AB 32)
 - Minimum forestry sequestration -5 MMT target
 - Board of Forestry to enforce target and promote additional benefits
 - Included a cap and trade market
 - Offset policy consistent with WCI (up to 49% allowances)
- Protocols for reforestation, conservation, management, and urban forestry approved by ARB
 - Improvements near finished to allow public agencies to participate and encourage private land owners
 - New discussions with National Forest Carbon Standards Committee
- Local demos:
 - fuel reduction x bioenergy x air quality
 - Reforestation in State Parks
- Projections for wildfire, vegetation change and productivity impacts

Challenges

- Get the forest GHG inventory right
- Improve protocols to increase landowner use
- Ensure that landowners benefit from carbon or energy markets so they can continue to reduce hazardous forest fuels
- Maintain and improve infrastructure and policies for biomass use (wood products, bio-energy)
- Improve science on fuels management mitigation benefits and life cycle analysis of construction materials
- Funding:
 - Clarify links between adaptation and mitigation and explore opportunities (eg dedicate some allowance revenues to adaptation)
 - Consider how co-benefits may increase funding for mitigation projects
- Move past traditional stakeholder conflicts

Questions

